AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Cancelled)

2. (Currently Amended) ~~The method for measuring the concentration of the specific component in accordance with claim 1,~~ A method for measuring the concentration of a specific component contained in a living body comprising the steps of:

(1) introducing light into an optical element, which is absorbed and reflected by a living body in contact with said optical element and then emitted from said optical element;

(2) detecting the light emitted from said optical element and obtaining a wavenumber signal from the detected light;

(3) correcting said wavenumber signal with the use of a calibration line for correcting the influence of a change in the state of an interface between said living body and said optical element on said wavenumber signal,

(4) obtaining the concentration of the specific component contained in said living body from the corrected wavenumber signal; and

(5) outputting the concentration of the specific component,

wherein said calibration line of is prepared by the steps of:

(3a) obtaining "i" different spectrums corresponding to "i" different states of said interface, where said "i" is an integer from 2 to n; and

(3b) plotting "i" different points in a coordinate system and connecting said points to obtain a calibration line, each of said "i" different points being determined from "j" different wavenumber signals corresponding to "j" different wavenumbers in each of said "i" different spectrums, where said "j" is an integer from 2 to n.

3. (Previously Presented) The method for measuring the concentration of the specific component in accordance with claim 2, wherein

said step (3a) is a step of obtaining a first spectrum corresponding to a first state of said interface and a second spectrum corresponding to a second state of said interface, and

said step (3b) is a step of plotting two points (x1, y1) and (x2, y2) in a coordinate system and connecting said two points to obtain a calibration line, one of said two points (x1, y1) being determined in said first spectrum by a first wavenumber signal x1 at a first wavenumber whose signal varies depending on a state of said interface and a second wavenumber signal y1 at a second wavenumber whose signal varies depending on a concentration of said specific component and the other of said two points (x2, y2) being determined in said second spectrum by a third wavenumber signal x2 at said first wavenumber and a fourth wavenumber signal y2 at said second wavenumber.

4. (Previously Presented) The method for measuring the concentration of the specific component in accordance with claim 3, wherein said step (3) further comprises steps of:

preparing a second calibration line having the same inclination as said calibration line and passing through a third point (x3, y3), which is determined by a fifth wavenumber x3 obtained from said detected light at said first wavenumber and a sixth wavenumber signal y3 obtained from said detected light at said second wavenumber; and

converting a seventh wavenumber signal at said first wavenumber obtained when the state of said interface is assumed to be in a temporary condition into an eighth wavenumber signal at said second wavenumber based on said second calibration line.

5. (Currently Amended) ~~The method for measuring the concentration of the specific component in accordance with claim 1,~~ A method for measuring the concentration of a specific component contained in a living body comprising the steps of:

(1) introducing light into an optical element, which is absorbed and reflected by a living body in contact with said optical element and then emitted from said optical element;

(2) detecting the light emitted from said optical element and obtaining a wavenumber signal from the detected light;

(3) correcting said wavenumber signal with the use of a calibration line for correcting the influence of a change in the state of an interface between said living body and said optical element on said wavenumber signal;

(4) obtaining the concentration of the specific component contained in said living body from the corrected wavenumber signal; and

(5) outputting the concentration of the specific component,

wherein said calibration line is prepared by the steps of:

(3A) obtaining "i" different spectrums corresponding to "i" different states of said interface, where said "i" is an integer from 2 to n, while said optical element is in contact with said living body; and

(3B) plotting "i" different points in a coordinate system and connecting said points to obtain a calibration line, each of said "i" different points being determined from "j" different wavenumber signals corresponding to "j" different wavenumbers in each of said "i" different spectrums, where said "j" is an integer from 2 to n.

6. (Previously Presented) The method for measuring the concentration of the specific component in accordance with claim 5, wherein

said step (3A) is a step of obtaining a first spectrum corresponding to a first state of said interface and a second spectrum corresponding to a second state of said interface, and

said step (3B) is a step of plotting two points (x1, y1) and (x2, y2) in a coordinate system and connecting said two points to obtain a calibration line, one of said two points (x1, y1) being determined in said first spectrum by a first wavenumber signal x1 at a first wavenumber whose signal varies depending on a state of said interface and a second wavenumber signal y1 at a second wavenumber whose signal varies depending on a concentration of said specific component and the other of said two points (x2, y2) being determined in said second spectrum by a third wavenumber signal x2 at said first wavenumber and a fourth wavenumber signal y2 at said second wavenumber.

7. (Previously Presented) The method for measuring the concentration of the specific component in accordance with claim 6, wherein said step (3) further comprises steps of:

preparing a second calibration line having the same inclination as said calibration line and passing through a third point (x3, y3), which is determined by a fifth wavenumber x3 obtained from said detected light at said first wavenumber and a sixth wavenumber signal y3 obtained from said detected light at said second wavenumber; and

converting a seventh wavenumber signal at said first wavenumber obtained when the state of said interface is assumed to be in a temporary condition into an eighth wavenumber signal at said second wavenumber based on said second calibration line.

8. (Currently amended) The method for measuring the concentration of the specific component in accordance with claim 2 ~~1~~, wherein said change in the state of said interface means a change in the thickness of a fluid layer.

9. (Currently amended) The method for measuring the concentration of the specific component in accordance with claim 4, wherein the preparation of said calibration line involves the use of wavenumber signals at two or more wavenumbers in the range of 700 to 3200 cm^{-1} ~~and the use of a wavenumber signal at any of said two or more wavenumbers as said temporary condition~~.

10. (Currently amended) A device for measuring the concentration of the specific component contained in a living body comprising:

(a) an optical element adapted to be brought into contact with a living body;

(b) a light source for introducing light into said optical element;

(c) a light detecting means for detecting the light emitted from said optical element; and

(d) a signal processing means for processing a wavenumber signal obtained in said light detecting means to correct said wavenumber signal with the use of one or more calibration line(s), wherein said signal processing means

(1) memorizes a first calibration ~~memorizes a first calibration~~ line comprising:

a first point (x1, y2) determined in a first spectrum obtained when an interface between said living body and said optical element is in a first state by a first wavenumber signal x1 at a first wavenumber whose signal varies depending on a state of said interface and a second wavenumber signal y1 at a second wavenumber whose signal varies depending on a concentration of said specific component, and

a second point (x2, y2) determined in a second spectrum obtained when the interface between said living body and said optical element is in a second state by a third wavenumber signal x2 at said first wavenumber and a fourth wavenumber signal y2 at said second wavenumber;

(2) prepares a second calibration line having the same inclination as said first calibration line and passing through a third point (x3, y3), which is determined by a fifth wavenumber x3 obtained from said detected light at said first wavenumber and a sixth wavenumber signal y3 obtained from said detected light at said second wavenumber;

(3) converts a seventh wavenumber signal at said first wavenumber obtained when the state of said interface is assumed to be in a temporary condition into an eighth wavenumber signal at said second wavenumber based on said second calibration line; and

(4) calculates the concentration of said specific component based on said eighth wavenumber signal.

11. (Cancelled)

12. (Currently amended) The device for measuring the concentration of the specific component in accordance with claim 10, wherein said signal processing means calculates said first calibration line ~~calibration line(s)~~.

13. (Cancelled)

14. (Currently amended) The device for measuring the concentration of the specific component in accordance with claim 10, wherein a fluid layer is present at said interface. ~~said calibration line is a calibration line for correcting the influence of a change in the thickness of a fluid layer present at the interface between said living body and said optical element on said wavenumber signal.~~

15. (Currently amended) The device for measuring the concentration of the specific component in accordance with claim 10, ~~13,~~ wherein said first wavenumber and said second wavenumber are wavenumbers selected from ~~temporary condition is a wavenumber signal at any of the two or more wavenumbers in the range of~~ 700 to 3200 cm^{-1}.

16. (New) The method for measuring the concentration of the specific component in accordance with claim 5, wherein said change in the state of said interface means a change in the thickness of a fluid layer.